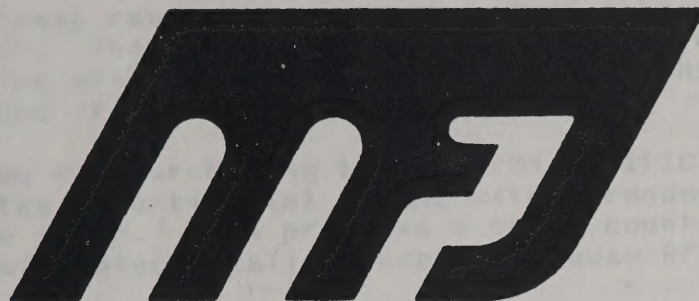


601-3V3-5869

1-800-647-1800 OADER

601-3V3-9715



MFJ ARTIFICIAL RF GROUND MODEL MFJ-931



OWNER'S MANUAL

CAUTION: Read All Instructions Before Operating Equipment.

MFJ ENTERPRISES, INC.

P. O. BOX 494, MISSISSIPPI STATE, MS. 39762, USA

© MFJ ENTERPRISES, INC.

MFJ ARTIFICIAL GROUND

IMPORTANT: Please read entire manual before attempting to operate this equipment. This unit does NOT provide a DC electric ground. A separate wire will need to be run from the transmitter to an electric ground if it is not already available.

Thank you for purchasing the MFJ-931 ARTIFICIAL GROUND. The MFJ-931 creates an artificial ground with a random length of wire thrown on the floor. This produces a tuned counterpoise. Also, the MFJ-931 will electrically place a far away RF ground directly at your rig.

INSTALLATION AND OPERATION

CREATING ARTIFICIAL GROUND:

Connect your transmitter or antenna tuner to the binding post labeled "To Transmitter or Antenna Tuner Chassis Ground" on the back of the MFJ-931. **NOTE:** This wire needs to be as short as possible preferably with the ground posts as close as possible i.e., the units side by side or one on top of the other. Attach the length of random wire to the red binding post labeled "To Counterpoise Wire or Ground Connection Wire" on the back of the MFJ-931. Be sure NOT to reverse these wires. The random wire should be a quarter-wave length or less at the operating frequency. Be sure to throw the random wire along the floor and to TAPE UP the open end of the wire to avoid RF burn. (**DANGER:** Touching the wire while keying can cause RF burn and is potentially fatal. Watch out for kids and pets.)

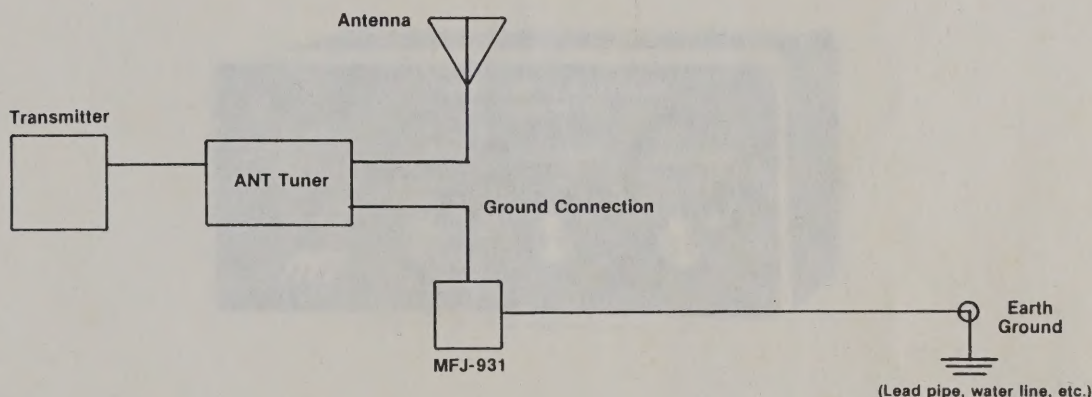
To obtain maximum RF ground current for a low impedance RF ground, alternately adjust the two knobs labeled "INDUCTANCE" and "CAPACITANCE". Turn the Inductance knob first until the highest amount of current can be registered on the built-in AMMETER. Then adjust the Capacitance knob to increase the amount of RF current. Try several Inductance settings for best results. What if the needle goes off the scale or doesn't move at all? Then the SENSITIVITY of the Ammeter needs to be adjusted. Turn the knob until the needle is in the middle of the scale. Then readjust the Inductance knob for the highest amount of RF current and use the Capacitance knob to achieve maximum RF current. If the needle is still off scale or zero, readjust the Sensitivity knob and repeat the tuning process until maximum RF current is achieved. After maximum RF current is reached, retune your antenna tuner for minimum SWR. You may need to retune both the MFJ-931 and your antenna tuner several times to achieve best results.

ELECTRICALLY PLACING YOUR FAR AWAY RF GROUND AT YOUR RADIO:

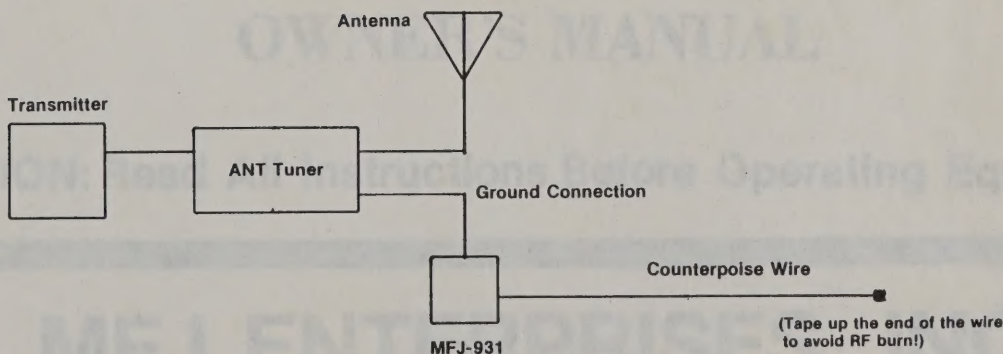
Connect your transmitter or antenna tuner to the binding post labeled "To Transmitter or Antenna Tuner Chassis Ground" on the back of the MFJ-931 with the shortest possible wires. IF necessary, place the MFJ-931 and your transmitter or antenna tuner side by side or one on top of the other to insure the ground of each are as close to each other as possible. Connect your existing ground wire to the red binding post labeled "To Counterpoise Wire or Ground Connection Wire" on the back of the MFJ-931. Do not reverse these wires. After making these connections, follow the same procedure for maximizing RF Ground Current as described in the "Creating Artificial Ground" section. After maximum RF current is reached, retune your antenna tuner for minimum SWR. You may need to retune both your antenna tuner and the MFJ-931 several times to achieve best results.

WARNING: This unit does NOT provide a DC electric ground. A separate wire will need to be run from the transmitter to an electric ground if it is not already available.

PLACING RF GROUND NEAR YOUR RADIO:



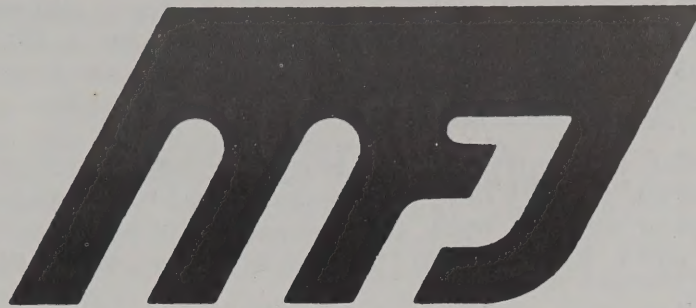
CREATING ARTIFICIAL GROUND:



601-3V3-5869

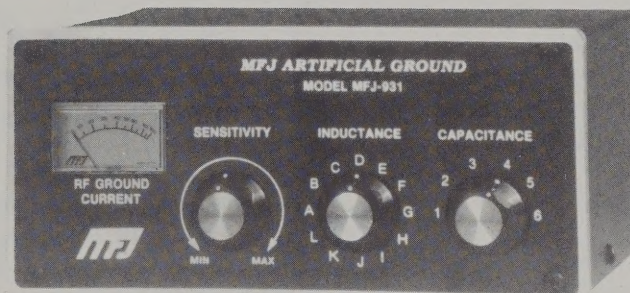
1-800-647-1800 ORDER

601-3V3-9715



MFJ ARTIFICIAL RF GROUND

MODEL MFJ-931



OWNER'S MANUAL

CAUTION: Read All Instructions Before Operating Equipment.

MFJ ENTERPRISES, INC.

P. O. BOX 494, MISSISSIPPI STATE, MS. 39762, USA

© MFJ ENTERPRISES, INC.

MFJ ARTIFICIAL GROUND

IMPORTANT: Please read entire manual before attempting to operate this equipment. This unit does NOT provide a DC electric ground. A separate wire will need to be run from the transmitter to an electric ground if it is not already available.

Thank you for purchasing the MFJ-931 ARTIFICIAL GROUND. The MFJ-931 creates an artificial ground with a random length of wire thrown on the floor. This produces a tuned counterpoise. Also, the MFJ-931 will electrically place a far away RF ground directly at your rig.

INSTALLATION AND OPERATION

CREATING ARTIFICIAL GROUND:

Connect your transmitter or antenna tuner to the binding post labeled "To Transmitter or Antenna Tuner Chassis Ground" on the back of the MFJ-931. **NOTE:** This wire needs to be as short as possible preferably with the ground posts as close as possible i.e., the units side by side or one on top of the other. Attach the length of random wire to the red binding post labeled "To Counterpoise Wire or Ground Connection Wire" on the back of the MFJ-931. Be sure NOT to reverse these wires. The random wire should be a quarter-wave length or less at the operating frequency. Be sure to throw the random wire along the floor and to TAPE UP the open end of the wire to avoid RF burn. (**DANGER:** Touching the wire while keying can cause RF burn and is potentially fatal. Watch out for kids and pets.)

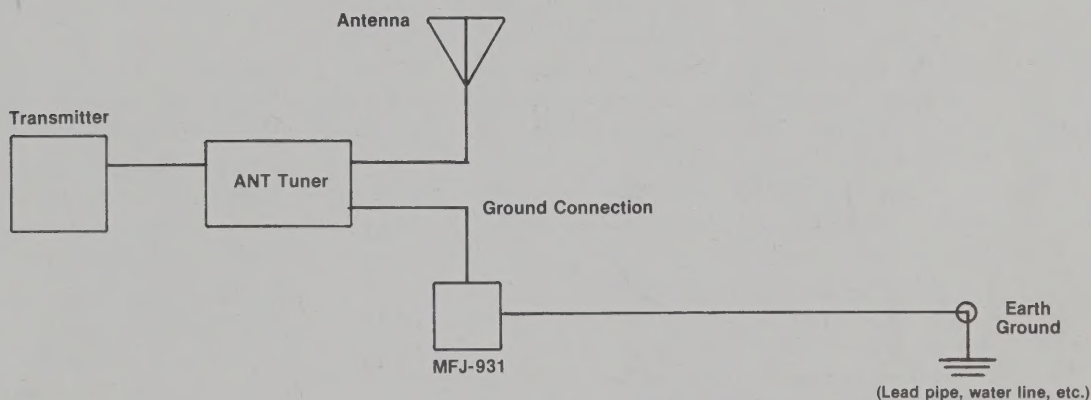
To obtain maximum RF ground current for a low impedance RF ground, alternately adjust the two knobs labeled "INDUCTANCE" and "CAPACITANCE". Turn the Inductance knob first until the highest amount of current can be registered on the built-in AMMETER. Then adjust the Capacitance knob to increase the amount of RF current. Try several Inductance settings for best results. What if the needle goes off the scale or doesn't move at all? Then the SENSITIVITY of the Ammeter needs to be adjusted. Turn the knob until the needle is in the middle of the scale. Then readjust the Inductance knob for the highest amount of RF current and use the Capacitance knob to achieve maximum RF current. If the needle is still off scale or zero, readjust the Sensitivity knob and repeat the tuning process until maximum RF current is achieved. After maximum RF current is reached, retune your antenna tuner for minimum SWR. You may need to retune both the MFJ-931 and your antenna tuner several times to achieve best results.

ELECTRICALLY PLACING YOUR FAR AWAY RF GROUND AT YOUR RADIO:

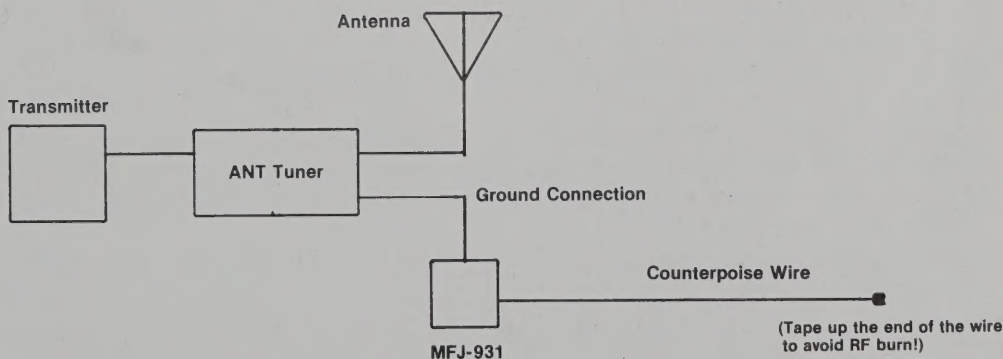
Connect your transmitter or antenna tuner to the binding post labeled "To Transmitter or Antenna Tuner Chassis Ground" on the back of the MFJ-931 with the shortest possible wires. IF necessary, place the MFJ-931 and your transmitter or antenna tuner side by side or one on top of the other to insure the ground of each are as close to each other as possible. Connect your existing ground wire to the red binding post labeled "To Counterpoise Wire or Ground Connection Wire" on the back of the MFJ-931. Do not reverse these wires. After making these connections, follow the same procedure for maximizing RF Ground Current as described in the "Creating Artificial Ground" section. After maximum RF current is reached, retune your antenna tuner for minimum SWR. You may need to retune both your antenna tuner and the MFJ-931 several times to achieve best results.

WARNING: This unit does NOT provide a DC electric ground. A separate wire will need to be run from the transmitter to an electric ground if it is not already available.

PLACING RF GROUND NEAR YOUR RADIO:



CREATING ARTIFICIAL GROUND:



FULL 12 MONTHS WARRANTY

MFJ Enterprises, Inc. warrants to the original owner of this product, if manufactured by MFJ Enterprises, Inc. and purchased from an authorized dealer or directly from MFJ Enterprises, Inc. to be free of defects in material and workmanship for a period of 12 months from date of purchase provided the following terms of this warranty are satisfied.

1. The purchaser must retain the dated proof-of-purchase (bill of sale, cancelled check, credit card or money order receipt, etc.) describing the product to establish the validity of warranty claim and must submit the original or a machine-reproduction of such proof-of-purchase to MFJ Enterprises, Inc. at the time of warranty service. MFJ Enterprises, Inc. shall have the discretion to deny warranty without dated proof-of-purchase. Any evidence of alteration, erasure, or forgery of proof-of-purchase shall be cause to void any and all warranty terms immediately.
2. MFJ Enterprises, Inc. agrees to repair or replace at MFJ's option without charge to the original owner any defective product provided the product is returned postage prepaid to MFJ Enterprises, Inc. with a personal check, cashier's check or money order for \$4.00 covering postage and handling.
3. MFJ Enterprises, Inc. will supply replacement parts free of charge for any MFJ product under warranty upon request. A dated proof-of-purchase and a \$4.00 personal check, cashier's check or money order must be provided to cover postage and handling.
4. This warranty is **NOT** void for owners who attempt to repair defective units. Technical consultation is available by calling (601) 323-5869.
5. This warranty does not apply to kits sold or manufactured by MFJ Enterprises, Inc.
6. Wired and tested PC board products are covered by this warranty provided **only the wired and tested PC board is returned**. Wired and tested PC boards installed in the owner's cabinet or connected to switches, jacks, cables, etc. sent to MFJ Enterprises, Inc. will be returned at the owner's expense unrepai red.
7. Under no circumstances is MFJ Enterprises, Inc. liable for consequential damages to person or property by the use of any MFJ product.
8. **Out-of-Warranty Service:** MFJ Enterprises, Inc. will repair any out-of-warranty product provided the unit is delivered prepaid. All charges will be shipped COD to the owner.
9. This warranty is given in lieu of any other warranty express or implied.
10. MFJ Enterprises, Inc. reserves the right to make changes or improvement in design or manufacture without incurring any obligation to install such changes upon any of the products previously manufactured.
11. All MFJ products to be serviced in-warranty or out-of-warranty should be addressed to **MFJ Enterprises, Inc., 921A Louisville Road, Starkville, Mississippi 39759, USA** and must be accompanied by a letter describing the problem in detail along with a copy of your dated proof-of-purchase.
12. This warranty gives you specific rights, and you may also have other rights which vary from state to state.